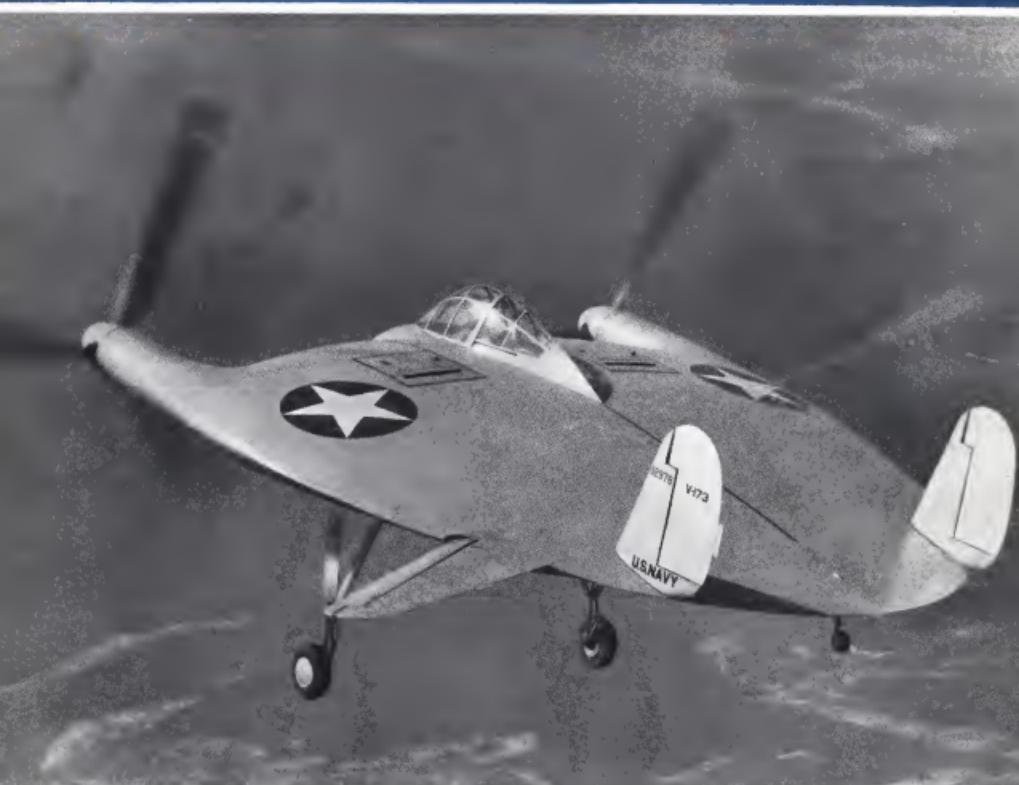


Aviation News

MCGRAW-HILL PUBLISHING COMPANY, INC.

JULY 1, 1946



Navy's 'Flying Pancake': Shown is the full-scale, low-powered flying model of the XF5U-1, Chance Vought Aircraft's radical design which hovers on its props like a helicopter. This version, the V-173, was first flown in 1942. The XF5U-1 itself has been completed and will be test flown probably in September. Story on Page 7. (Official U. S. Navy photograph.)

Air Corps Fund of \$1,199,500,000 Passes in House

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Main value seen in scientific data and weather-forecast techniques.....Page 12

Airline 'Monopoly' in Freight Charged by Non-Scheds

IAT asks Congress to cancel major carriers' 'exorbitant' mail contracts.....Page 27

CAB Decisions Boost U.S. Commercial Airline Lead

Latest route figures show American carriers are flying 4,919,341 miles.....Page 29

THE *New* HONEYWELL ELECTRONIC

Fuel Gage

THE TANK UNIT...

The tank unit is the fuel measuring part of the system. It contains a float assembly which floats on the fuel surface and transmits the level of the fuel to the indicator. The tank unit is a rugged unit and protection should be taken for the other two, which

From the two plates of a condenser. A hinge is provided in one end of the assembly for mounting the unit in the tank. The rugged construction of this unit and the absence of any moving parts or stations, compensates it's inherent disadvantages for any aircraft. Beyond its inherent simplicity.

THE POWER UNIT

Aside from the tank unit and the indicator, all electronic components are contained in the power unit which consists of an amplifier and a condenser and integrated together on a single printed circuit board. The power unit is a sealed shelf or stack is provided in the equipment. The amplifier may be easily detached from the equipment since the inter-spaced approach provides for a minimum of additional clearance of the equipment. Adjustments for both empty and full calibrations are provided on the indicator unit. The indicator is easily modifiable in the case of installation by merely connecting a standard entailing condenser between two terminals in the indicator unit. This can be done by simply cutting the wires and putting up the wings to achieve each installation.

THE INDICATOR

The indicator, which is designed for continuous panel mounting in a 15% pitch spacing, requires but one cavity in the aircraft for its installation. The indicator is powered by a single rectangular motor which rotates the pointer and the balance potentiometer through a 720° arc. The indicator has a 100% self-reverse feature, which permits the indicator to respond to necessary changes in fuel level. The indicator is calibrated in liters and kilograms for metric fuel measurements. (The scale may be addressed in pounds if desired.)

Minneapolis-Honeywell Regulator Company, 3500 Summit Avenue South, Minneapolis 6, Minnesota. Branch and distributor offices in all principal areas.

THE AVIATION NEWS

Washington Observer



POINTED out, that when LeMay took charge of the B-52's on Sept. 1, a great part of the job involved engineering problems which had been accumulated in B-52 operations.

CORRECT AIRPORT FLAW—Legislation opening the way for construction of large airports (three hour and five) during the 1947 fiscal year appears slated for early enactment. Introduced in the House by Rep. Alford Brumfield (D., N. C.) and in the Senate by Sen. Pat McCarran (D., Nev.), the measure carries a technical flaw in the Airport Act which would let the building of large ports before July. The bill has been passed by the House and approved by the Senate Commerce Committee. Approval by the Senate and the President is expected to be routine.

COMMUNITIES NOT HAPPY—The recent CAB legislation decisions satisfied few of the communities concerned. Both coast pressed with floodline service, and those denied any service are flooding the lines with power and. The ones being served by telephone are satisfied because they did not get major electric utility service and are to be served by what they term "inexpensive" companies.

STEAMSHIP SPEAKMAN DEFEATED—Sen. George Radcliffe (D-Md.), one of Capitol Hill's leading spokesman for the steamship interests, was defeated for the Democratic Senatorial nomination by Gov. Stephen O'Conor. Radcliffe was one of the most active members of the Senate Commerce committee on transportation. He sponsored the "tariff" report, which asserted that CAB should award Pan American Airways domestic routes in light of its awarded domestic and international routes.

LEMAY BACKGROUND—The quiet criticism of the appointment of Maj. Gen. Curtis LeMay as head of AAF's research and development is vanishing. LeMay's long-time acquaintances. To the charge that AAF's research base is a combat general with little knowledge of the involved technical problems connected with AAF's research problems, these friends assert that LeMay before the war was AAF's commanding navigation officer and spent his entire previous Army career in the technical end of aviation. Further, it is

STATE'S EXPORT POLICY—To all requests for export licenses on U.S. military planes, the State Department is giving a flat rejection. Public explanation: The U.S. is committed, under the United Nations Charter, to an international military security organization, and it would be inconsistent in that ideal for this country to export military aircraft. It has been pointed out to State that Gen. James Burns, also a Chamber agency, has expressed pro-proposal "Vanguard" to Sweden, and is requesting the French air force, but State is sticking to its "no," and warning the Army which wants to have military planes sold particularly in South America for purposes of Hemisphere modernization in military equipment.

FLAG LINE BILL—Senate Commerce Committee agreed at an executive session to take up the McCarran All American Flag Line" bill that failed in Congress last November. McCarran requested the committee to bind itself in action on his "commerce company" bill. Under the pressure of other business Senate Committee has twice called off hearings on the measure during the past month.

WASHINGTON OBSERVER — 3



They carry the Constellation

There is just one reason why so many Constellations and other super-airliners are being equipped with Goodyear tires. Both aircraft manufacturers and airline operators have learned from long experience that Goodyear tires are standard in magnificence, dependability and safety—superiority stemming from Goodyear's 30 years of leadership in airplane tire development.

No matter what year operation, or kind of ship, there is a Goodyear tire specially designed to meet your specifications—four extra-low to highest pressure types, loaded with tires or tires cord to meet any load requirement. For full data, write: Goodyear Aviation Products Division, Akron 16, Ohio or Los Angeles 54, California.



More aircraft land on Goodyear tires than on any other kind

Navy Reveals 'Flying Pancake' As Radical Experimental Model

XP5U-1 has conventional power but can hover like helicopter; has stratosphere range from zero to 550 mph with gas turbine power and uses new aerodynamic principle.

The development of one of the most striking aircraft designs in aviation history, the XP5U-1—a conventionally-powered plane that can hover like a helicopter—was announced last week by the Navy Department and Chance Vought Aircraft division of United Aircraft Corp.

Consisting essentially of a metal wire with twisted propellers at the outer edges, the "Skimmer," or "Flying Pancake," seemingly violates every rule of aerodynamics, yet paradoxically promises to rival the fixed-wing aircraft in speed and the helicopter in utility.

Sixteen features of the XP5U-1 is its amazing speed range. While designers for years have not been able to do better than a 1 to 4 ratio of landing speed to top speed, the Vought aircraft ranges from 48 to 490 mph with standard engines, 20 to 460 mph with water injection engines, and 0 to 850 mph with gas turbine power plants.

The last main feature is the spotlight on the airplane's other distinctive characteristic: ability to hover like a helicopter. This is made possible by a specially designed type of blade, similar to that used on helicopters. These propellers were developed for the XP5U-1 by Eletrocon Standard, another United Aircraft subsidiary.

By standing the plane on its tail, the pilot will be able to suspend in the air, his forward speed depending on the power available, 0 mph requiring the greatest power in this position, as the propeller blade moves forward. It overcomes a distinct disadvantage, as it requires an altitude on the ground to take off.

The XP5U-1 is expected to be given its test flight at Standard. The practicability of the design, however, has been proven in terms of an earlier version, the V-17A, which first flew in 1942. This, al-

though a full-scale model, was constructed of wood and fabric and used low-power engines.

Other features of the XP5U-1 include:

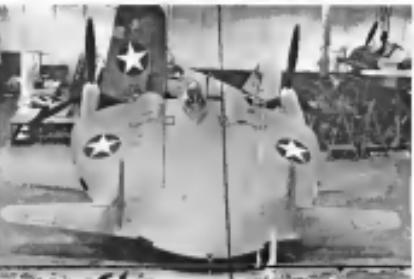
Power by two Pratt & Whitney R-2800 Twin Wasp engines developing 2300 h.p. at 3700 r.p.m. for

takoff. These engines are "buried" in the wing on either side of the cockpit and drive the propellers at the tips through right-angle transmission systems which include approximately a 3:1 propeller reduction gearing. Special clutches permit either engine to drive both propellers in emergency.

Controls located on the wing trailing edge including twin vertical fins and rudders and special elevon-type horizontal stabilizers are mounted on either side of the rear of the wing. These latter consist of "wheelers" for longitudinal control and "sabreons" provided by differential movement of the stabilizers.



Naval Design News Test Stage. Shown is the completed XP5U-1, and a rear view of a mock-up of the fuselage model of Chance Vought's revolutionary design which, despite its seeming aerodynamic inefficiency, looks for squared the ratio between landing speed and top speed, unless far more power has stood at 1 to 4.



AVIATION CALENDAR

July 1945—AAA national aircraft survey begins.
July 20—AAA national aircraft survey ends.
July 21—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
July 22—Inauguration of President Truman.
July 23—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
July 24—AAA first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 1—AAA national aircraft survey begins.
Aug. 2—AAA national aircraft survey ends.
Aug. 3—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 4—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 5—AAA national aircraft survey begins.
Aug. 6—AAA national aircraft survey ends.
Aug. 7—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 8—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 9—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 10—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 11—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 12—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 13—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 14—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 15—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 16—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 17—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 18—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
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Aug. 25—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 26—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 27—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 28—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 29—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 30—B-52 first flight. First flight of the Boeing B-52 heavy bomber.
Aug. 31—B-52 first flight. First flight of the Boeing B-52 heavy bomber.

portions, which are controllable.
Tricycle landing gear mounting dual wheels on each strut and folding upward and aft into clamshell doors in the wing lower surface.

The radical craft is an outgrowth of pioneering research into low aspect ratio (approximately the ratio of length to width of a wing) designs by Charles H. Zimmerman, consulting engineer for Chance Vought Aircraft. Zimmerman first conceived the idea in 1936, during design work in charge of the Structures and Control section of MACA's Langley Memorial Aerodynamics Laboratory, which he joined in 1936. As an theoretical aerodynamicist for MACA, he was chiefly responsible for the design of such unorthodox wind tunnels as the famous LMAL Wind Tunnel and the Free Span Tunnel.

As early as 1935 Zimmerman began experiments on low aspect ratio designs and his tests revealed that whereas the type had been scorned by engineers due to its theoretical inefficiency actually the new design was more efficient than conventional long, narrow wings due to its inherently greater lift and fat lower drag. The greatest loss of aerodynamic efficiency is created by wing tip vortices which occur through "tipfins" of the aircraft from the underside of the wing around tips to upper surface.

Zimmerman conceived the idea of using counter-rotating propellers at the wing tips to reduce the opposite direction to those vortices, thereby preventing their formation and achieving an equivalent aerodynamic aspect ratio of as high as 4, from a geometric aspect ratio of only 1. He patented that idea in 1936 and the following year sold them to the Chance Vought Corporation, who hired him as consulting engineer on the project.

From the idea the finished product has been a real boost with problems costing several million dollars in time and effort. The design progressed through wind tunnel models, flying scale models and a semi-cantilever model. The Navy became interested in the project in 1940 and awarded a development contract including the construction of the fusel, tail, engine, structural design which has now been brought to completion.

Primary advantage of the round wing design is its phenomenal rate-of-climb, considerably higher than any other Navy conventionally-powered aircraft tested to date. A further advantage, provided by the counter-rotating propellers, is a practically stall-proof characteristic even with power greatly reduced. The continuous supply of air entering the aircraft contains any tendency of the wing to stall. The same phenomenon also produces the higher equivalent aspect ratio with its attendant long-range endurance advantages.

The actual uses of the XP5U-1 type are numerous and may include the following:

- High speed combat plane (up to 400 mph with gas turbine-driven propellers, making it the fastest propeller-driven aircraft in the world).

Interspersed with probably the highest rate-of-climb of any aircraft in existence at low altitudes.

- Fleet spotters utilizing its heliport hovering characteristic to report fire results for battleships and carriers.

To date no plans for production of the XP5U-1 have been announced due to its experimental status. However, more advanced versions, including a jet and supersonic versions, are planned. Engineers are confident that the round wing design may well prove an entirely new aircraft form destined to rival the flying wing in the predominate aircraft configuration of future designs.

Fate of CAA Repair Funds in Conference

Question of whether CAA will be able to maintain a repair base for its own aircraft was up to a Senate-House conference committee last week following Senate passage of the Commerce Department appropriation bill with the substrate for the House Randolph amendment (AVIATION NEWS, June 24, 1946) which would have curtailed CAA's aims.

Hearings of the Senate Appropriations Committee, made public last week, reveal that CAA's authority to proceed with plans for the repair base was restored, along with most of the Senate's amendment, following a detailed examination by T. P. Wright to the committee.

Although congressional, as well as other Senators during the floor debate, expressed opposition to a CAA venture into a field formerly exploited by private enterprise, disposition of the Senate's bill to accept Wright's word for the need for the base and leave it up to the conference committee to arrive at a settlement of differences between the two houses.

Italy Approves TWA

TWA received word last week that the Italian Council of Ministers had approved a decree law providing for the establishment of the Italian airline in which the U. S. carrier would participate under the terms of an agreement in TWA's agreement with the Italian Government. The law now has to be approved by the prime minister, and probably by the Allied Government in Italy. TWA capital want be raised and planes—probably surplus C-47s—bought and modified, before the operation can start.

Shots to NAS

Lois Shinn has been appointed director of public relations of the National Aircraft Show, and Ken Friedman is named assistant director. Shinn was in Navy public relations for aviation during the war, and now has charge has been with Popular Science Monthly Friedman, a western AAF major, has been with Air Force.

Because of the change in status, Shinn will return to members of Aviation Writers Association, to which post he was elected in May. He will be succeeded by Gene Drane, aviation editor of the Indianapolis News, who has been first vice-president of AWA.

Air Corps Fund of \$1,199,500,000 Passes House After Budget Cut

Appropriation provides for 70 group combat strength supplemented by reserves and National Guard; plane strength of 33,614 including 19 jet bombers, 1,119 jet fighters; long 226 bases.

An Army Air Corps appropriation for the coming fiscal year of \$1,199,500,000 was adopted by the House in passing the War Department budget last week.

The Air Corps originally requested an appropriation of \$1,307,306,656. This was increased \$100,488,515 by the Budget Bureau to \$1,209,790,000, the amount approved by the House Appropriations Committee and the House.

A fraction of wartime Air Corps budgets which reached a peak of \$13,659,451,000 in 1944, the current year budget will permit the Air Corps to return:

• A personnel strength totaling 66,000, forming 50 combat groups. This is approximately one-sixth of the Air Corps' peak wartime strength of 3,500,000, but 17 times its 1939 strength of 36,000. The major portion of the Air Corps personnel during the coming year—218,000—will be stationed overseas. The remaining 148,000 will be stationed on the continent.

• A plane strength of 35,814, of which 18,200 will be jet bombers and 1,119 jet fighters. Air Corps plane to declare surplus approximately 19,000 of the 35,800 planes it now has on hand, and to procure a total of 1,050 new planes during the 1947 fiscal year. The rate of procurement is approximately 50 percent of the average rate laid down by the Air Comptroller's Committee in response to the recommendation of an adequate aircraft manufacturing industry. The 22,614-plane purchase

gram will be small, according to information furnished House Appropriations Committee, involving a total expenditure of \$100,000, which will be turned over to Curtiss-Wright Corp. in development contracts. Lt. Gen. Ira C. Eaker, deputy commander, AAF reported to House Appropriations committee that the Air Corps is still in the process of developing a missile. Development has not progressed sufficiently far, he said, to enable procurement of the weapon.

The Air Corps' appropriation is subdivided as follows:

• For procurement and production, \$435,364,388. This compares with an \$8,817,431,132 procurement program during the 1945 war year. Of the total procurement allocation, \$481,630,000 will be utilized to purchase 1,003 aircraft, including AAF's request of \$102,717,500 for procurement of 1,193 planes, was transmitted by the Budget Bureau.

Aircraft to be acquired by the Air Corps during the coming year are as follows, with figures in parentheses indicating the number of craft requested by AAF: four-engine heavy bombers, 180 (180); six-engine heavy bombers, 13 (13); fighter ac-

AAF'S LARGEST BOMBER BEING PREPARED FOR FLIGHT TESTS

First photo of Consolidated Vultee's XB-38, six-engine pusher bomber, near being readied at the Fort

Worth plant. Powered by Pratt & Whitney Wasp Majors, plane has 220 ft. span, length of 207 ft.



interceptors, 526 (56); heavy transports, some (27); transport, troop carriers, none (46); four-engine reconnaissance, 13 (12); one-engine liaison, 162 (162); rotary wing, 44 (45); primary trainers, 25 (46); basic trainers, 18 (48).

It is planned to expand \$2,000,000 for procurement of two types of gliders, one with a 1,000-pound payload and the other with a 15,000-pound payload. The Air Corps will use \$1,000,000 of its procurement allocation for construction of new facilities at the Consolidated Vultee plant at Fort Worth, and \$1,000,000 for new facilities at the General Electric Company plant at Westinghouse, Mass.

Operations and maintenance, \$502,725,448. This component will be expended in 1945 with an operating budget of \$1,000,000-\$2,000,000. Largest expenditures under this category are to be \$430,000,000 for procurement of depots and stations, \$183,104,948 for operation of aircraft, and \$54,500,000 for maintenance services, including \$46,000,000 for Air Transport Command, continuing with the commercial airlines for air freight services. ATC plans to contract for services with air lines during the coming year. American, TWA, Pan American, United, American Overseas, and Northwest.

ATC mileage during the next year, it is estimated, will amount to only about 50 per cent of the mileage travelled during the present fiscal year—\$18,000,000, of which \$6,000,000 was an overrun reserve and \$12,000,000 on domestic routes. For the current year, ATC mileage over foreign routes is estimated at \$3,000,000 miles, and over domestic routes, at \$2,000,000.

Under operations and maintenance \$32,024,000 will be expended for storage of surplus aircraft and equipment, surplus disposal, and \$19,300,000 on modernization of aircraft in service. The Air Corps program for modernization planes on hand will be enlarged (total \$16,000,000) and spent on modernization during the present fiscal year, despite the greater number of such aircraft, primarily because of the longer life of planes during procurement.

Modifications and training, \$4,412,000. This component with an expenditure of \$16,000,000 for this purpose during

during the coming year. Gen Spates reported that the pilot training rate would be stepped up to 3,000 a year during the coming year, and ultimately to a production output of approximately 5,000 pilots each year.

For the procurement reserve of pilot strength, the Air Corps will rely heavily on the Organized Air Reserve and the Air National Guard. Organized Air Reserve has reported over a \$400,000,000 program for the coming year, involving 22,000 reserve pilots and 33,000 administrative and general personnel. Air National Guard plans for the coming year call for the formation of 50 organizations with a total personnel of 57,300. At least one organization will be located in each state.

The operations component, of which K. C. Ferguss of Northwest Airlines is chairman, has scheduled a meeting at Denver July 15, 17, and 18, at which airfield operations committee by the ATC will be considered. Under this the conference would have jurisdiction over all matters involving operations problems as regards its members' domestic and consolidated routes. Officers will be a president, two vice-presidents, and a secretary, holding office for one year.

The directors also approved immediate establishment of an airbase engineering committee.

The board admitted to active membership five airlines formerly associate members American Overseas, Alaska, Pacific Northern, Caribbean-American, and Pan American.

CAB Clears Decision

The Civil Aeronautics Board indicated last week a question and answer clarification of its decision and proposed exception under its investigation of non-scheduled air carriers. The clarification, which changed nothing, was distributed to all parties in the non-scheduled case (Docket 1021) the press, and other interested parties. Further copies may be obtained from CAB's Division of Information.

Show Dates Changed

Dates of both the national aircraft shows of the Aircraft Industries Association have been changed. The Cleveland exhibition is now scheduled for Nov. 15-18 at the Fisher Building, Municipal Airport. The West Coast show is set for April, 1947, in Los Angeles. Date of this event has not yet been determined.

ATA Votes Research Fund for Navigation

Two important steps in the airline's study of traffic problems were taken last week by the board of directors of the Air Transport Association, which raised the status of ATA's operations committee to a full committee. They also forwarded its intention, and typed #3072,307 for transmittal by ATCA, to the Association's air navigation-travel committee.

Details of ATCA's program were not disclosed, but W. K. Rausch, who heads the division and the plans were ready and will be presented with immediacy. A C-47 is being acquired for the organization's use.

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Lockheed Test Flies New *Saturn* Feeder

First successful flight test has been made of the new Lockheed Saturn feederline transport, designed to carry 38 passengers or 3,000 lb. of cargo, or any combination of both. Simultaneously, the company announced that funding and assembly lines are being planned for a production program. It is expected to turn out one Saturn a month in 1947. Price of single unit is given as \$100,000.

Received considerable word to have been given to amending maximum operating economy, notwithstanding higher labor and materials costs, so that the new model could compete successfully with war surplus planes in air services serving a network of small communities.

Choice of power plants—either 800-hp Wright Cyclone or 650-hp Continental—is offered. These engines are fitted with two-blade propeller-type Aeroproducts aircrews. The Saturn's top speed is given as over 250 mph, and takeoff can be accomplished in 1,000 ft. At top gross weight of 16,000 lb., the range is stated to climb 1,800 ft. Although it has been designed primarily for short hauls, a maximum range of nearly 3,000 mi. is also claimed.

Span is 74 ft., length 55 ft. 6 in., and height 19 ft. 10 in. The low-wing design permits truck-level loading. Simplicity of maintenance has been stressed, and such items as main landing gear, landing gear doors, power plants, engine cooling, elevators and tabs, and wing tips are interchangeable from right to left or from plane to plane.

Davison to Sante Fe As Operating Chief

With direct activities of railroads C-47 fleet on western route, Robert Edward director of TACA.

John F. Davison, manager of the Trans-Atlantic operations of American Overseas Airlines, has been appointed operations manager for Santa Fe Railway, Inc.

Santa Fe Airways was organized by the Santa Fe railroad (AVIATION NEWS, May 10) to operate C-47s with crews of veterans派 to the Chicago-West Coast and routes. Railroad officials have been concerned over possible loss of some of their lucrative perishable freight business to air freight.

Parsons-Airways—Frank W. Shulman has been appointed director of rotary wing research. He was formerly a captain in the AAC as director of the Rotor development unit at Wright Field.



Lockheed "Saturn" Takes Off. First photo of company's prototype feederline aircraft shows craft retraction wheels after leaving ground as its first test flight. Especially noteworthy are high wing placement, offering good passenger visibility, and unusually high rudder, with extended fin area for maximum stability.

Lear, Inc.—Richard G. Learner, former wartime production chief and AAC Air Technical Service Command consultant, has been elected a director of the Harry Moore Corp. The firm will enter the aeronautics business.

Other industry personnel changes: **TACA**—Tortillida Barber, president of the Barber Aircraft Co., has been elected a director of TACA. **Avway**—S. A. Nelson & Fry has been appointed assistant director of traffic.

Eastern Air Lines—Theodore Gray was appointed southern division manager. **Candy**—joining Eastern after six years with Pan American Airways and four years with the Office of War Information as a technical advisor on the Far East.

Cheyenne & Southern—W. E. Curtis has been named assistant supervisor in charge of division. **W. R. Barker**, former sales manager in New Orleans, is now moving power plants, engine overhauls, elevators and tabs, and wing tips are interchangeable from right to left or from plane to plane.

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Douglas-Valmet—George C. Ford has been named division manager of the Valmet division at Downey, Calif.

Bikini Test Holds No Answer To Future of U. S. Warplanes

Man aviation value of *Corsair*'s operation seen in data, techniques used in Pacific weather forecasts, Blandy says no secret weapon is supposed atom bomb.

By SCHOLER BANGS

To those sweating out the approach of the atom bombs drop on Bikini on "Able Day," it has become increasingly apparent that the blast will not of itself dictate trends in the future design of this nation's military aircraft.

It will be of no importance whether obsolescent B-17 and F-8F drivers, encouraged to record the upward violence of the incendiary created by the radioactive blast bomb, survive or are torn to shreds.

Not Bikini, but at experimental proving grounds for supersonic planes, will the design of future American defense and offensive aircraft—man-carrying or winged missile—be determined.

Value in Transport—Operation Crossroads should be of innumerable value to Americans as transport, however, with the final analysis of weather forecasting, navigation and engineering techniques which have made Army and Navy air participation successful and singularly free from accidents.

Lt. Col. Anthony J. Ferris, Deputy Commander of the 15th Bomber Group, the Army's atom bomb droppers, said: "Commercial aviation will become immensely safer if use is made of what has been learned in preparation for the atom.

"The cost to airlines on the CAA in maintaining, in addition to weather forecasting facilities, weather as an air controller, regular flights of weather planes, and in providing radio channels for long range inter-service weather passing by pilots at night would be negligible in comparison with trip cancellation costs now attributable to unsatisfactory weather information."

Through economy, Army and Navy have had to use B-57s in weather reconnaissance planes, carrying meteorological and weather instruments to obtain weather data throughout thousands of square miles of ocean area not covered by weather reports of "regular" balloons, the latter being by radio.

B-57s in Flight—The weather balloons by daily morsions from Kwajalein, remaining out up to 12 hours. Their detailed information

on the islands of the atoll, which were strewn with the wrecks of barges, freighters and a submarine.

On board, passengers learned just as much as the crew. One witness was the hero of the storm, at the height of which the radio died and the altimeter went bad. "If we didn't have the radio working," commented a crewman, "we would still be out there sailing around." The radiomen called off the transistors one by one. Time after time, he warned, "bang coming in 10 seconds," and then, "now we are in the bang."

No Secret Weapon—Alfred Blandy, aboard B-57s with Major Kehler at Bikini and who will speak at a meeting this weekend about a report the secret weapon might be used as an addition to the atom bomb to test their destructive force, said the idea had been given up and the test now would be only for the atom bomb. How will the second test under way involve other weapons "unless I am in aspied."

He said of the evening when tests: "The stage is all set and our bombardiers are all ready if the weather man will do his part." In rehearsals the weather man missed one forecast out of five.

Blandy has 75 targets in the 15th group around the target ship *Neosho*, including those concrete barges for the purpose of testing the strength of American concrete compared with that of Japanese concrete structures at atom-bombed Nagasaki and Hiroshima.

In deciding to give the altitude from which the bomb will be dropped, bomb position in regard to the target, or description of bomb release or detonation methods, Blandy said: "We've got to make sure things clear to get them right. That is, that U. S. citizens in mid-air should not have a complete escort aspect of the Bikini results will go to the pilot crews of staff there or four months after the second (Baker day) test."

Justifying the experiment and saying he wants the test complete and successful, he added that "It's a matter of seeing what type the shape of the future should be and seeing if tomorrow could look the target ship sharper than the atom bomb. But we must know the effects of the atom bomb for future designs, for we will always need sharp shapes. As long as we use the atom we will need something to fight on."

Shock Wave Forces—First specific indication of the force of the atom bomb were the dropping plane which part of the time, when nose sat over the tops of the trees and hills



Arrival at San Francisco after a flight from Hawaii

Week-end at Waikiki

Above: The Golden Gate, the world's fastest, most comfortable passenger plane flies out over the Pacific.

Aboard a Boeing Stratocruiser from San Fran take off from San Francisco in the afternoon—eight O'Hearn Field the same evening. They can speed the whole of a wonderful weekend in Hawaii (or London, or Stockholm) and be home again on Monday if they like!

That's just one of the amazing results possible when you fly up by this fast, comfortable transport of the sea, up to 350 miles an hour—but often luxuriously spacious surroundings. Passengers have the advantage of a quiet flight at a comfortable altitude, yet breathe perfectly conditioned air, always kept of comfortable near-sea level pressure.

The Stratocruiser brings to consider and flight the outstanding performance, safety and dependability you would expect from Boeing—designer and builder of the B-17 Flying Fortress and the great B-52 Superfortress, Boeing Airplane Company, Seattle, Washington, Wichita, Kansas.



BOEING
STRATOCRUISER

The Stratocruiser's unequalled speed, comfort and reliability will soon be available to those forward-looking airlines—Pan American World Airways, British International Airlines, Northwest Airlines.

American Overseas Airlines—for which Boeing is building thousands of these super-comfortable

staff bombardier for the 58th Bomber Group, who was bombardier in the Nagasaki drop. The sharp dip against the underside of the wing, he says, has a force of about 2½ G's.

► **High Drop**—For the first time in history, bombing was done from an altitude of 40,000 ft, during test runs on the British Island, Rikuno Isago. Maj. W. P. Swanson, pilot of the test bomber, disclosed that, but without permission from his superiors, he had taken the "biggest" of the possible drops of the "Table-Day" release. "We had bombed all the way from 22,000 down to 18,000," he said. And the bomb release will be attempted on the second run, after one dry run approach to the Nevada test range 45 miles west of Las Vegas. This will be reduced 10 minutes in advance, then five, and at the end the order will go to all in planes and on ships to "put on polished needles." At one minute from the release point a radio time signal will broadcast from the border. When it comes it will mean "Bombs away."

C&S Halves Time For Chicago-Houston

Airline goes from Musk after four quarter deficit of \$400,000; DC-4 flying service begins.

Chicago & Southern Air Lines highlighted a four-city route and demonstration flight on one of its four newly converted DC-4's by halving the Houston-Chicago air-line time in a non-stop flight with Jimmy Doolittle aboard, and announced at a luncheon at LeGoff's Field that the company's month earlier with its DC-3 fleet since had gone into black ink from a first quarter deficit of nearly \$100,000.

The first DC-4 went into service June 16 in some unadvertised schedules to give employees and the company additional operating experience. Harvey Williams, the company's new executive vice-president, and it averaged a 35 percent load factor for the first week, increasing the company's gross income by about \$5,150 a day. Regular DC-4 service begins June 30 between Chicago and Houston.

More Revenue Jump—All of the four big planes, expected to be in service by early July, are able to meet that expanded schedule, they should be responsible for pumping company's monthly gross revenues by 80 percent, and passenger loads by 55 percent, Williams announced

in New York. The company then will be operating 25,000,000 passenger-miles a month.

The company's gross revenue in 1945 doubled those of 1944, and the 1946 figure will be doubled again in 1946, Williams forecast.

C&S is advertising its new fleet as the fastest and most luxurious DC-4's in service. It is demonstrating them over four years, rather than the two years dictated upon by several other lines, and has spent additional money on special comfort and service features in negotiations and engineers have obligated. The Glenn L. Martin Co. converted the aircraft. According to Williams, the longer demonstration period enables it possible to maximize the new aircraft at a little over 1,100 cents a passenger-mile.

► **Headline Abroad**—Newspaper and radio men from Canada, Paris, Chicago, Detroit, St. Louis, Memphis, New Orleans and Boston, and the editor of *Advertiser News*, flew with C&S officials headed by Williams, from Chicago to Memphis, New Orleans, Houston, Chicago, New York and Washington.

The 4½-mile non-stop Houston-Chicago run, with Doolittle in the office, accompanied by Fred Knapp, C&S superintendent of flying, and Post Office Joseph Morris, was made in 3 hours, 27 minutes, 59 seconds, averaging 265 mph at 18,000 feet, at 75 percent power output for the four Wright Cyclone R-3350 engines. Top ground speed attained was 384 mph.

The plane followed the company's regular route except for the Houston point below Little Rock and St. Louis. About 35 passengers and a crew of 5 were on the record flight. Regular DC-3 service time between Houston and Chicago (1,010 miles) is scheduled at 1 hour, 5 minutes.

The C&S planes represent the first commercial installation of the higher output R-3350 Cyclone engines, having up 1,750 hp at less weight than the standard Cyclone, and raising the cruising speed to more than 240 mph, 18 to 30 mph faster than other DC-4's.

The transports also beat the first unassisted installation of United Aircraft Corp.'s transonic propeller system. C&S officials predicted that they will first, with an "all-electronic" electronic pilot, and the first commercial airliners to use flight information more similar to that used on fighter aircraft.

Clark Sustains Legality Of Executive Air Pacts

Attorney General Tom Clark last week maintained the legality and constitutionality of the Bermuda Air Agreement to cooperate and maintain type executive air agreements, which have been challenged by the Senate Commerce Committee, in a letter to the Secretary of State.

Senate Commerce Committee by a 15 to 1 vote adopted a resolution (several) weeks ago declining the Bermuda agreement (signed last year) and, in its explanatory memorandum, maintained that the only two methods by which foreign surfaces may obtain operating rights to or within the United States are:

(1) After proper hearing and certification before the Civil Aeronautics Board. This procedure is authorized under the 1938 Civil Aeronautics Act, the Commerce Committee said.

(2) By treaty, which, under the Constitution, is the only vehicle which can over-ride congressional law.

Concurring in this view, Clark took the position that (1) the executive air agreements are in conformity with the 1938 Act and (2) there is no requirement under the Constitution that certain type agreements, of which we would be the agreements, must take the form of treaties.

The Attorney General based his opinion that the executive air agreements negotiated by the President are in conformity with Section 1002 of the 1938 legislation, which states that the CAB, in performing its duties, "shall do as consistently with any obligation assumed by the U. S. in any treaty, convention, or agreement that may be in force between the U. S. and any foreign nation."

This precision, Clark asserted, "makes it clear that the Congress contemplated the commencement of agreements with foreign nations relating to international civil aviation."

Clark maintained that other sections of the Act, stipulating that foreign carriers must be certified by the CAB, is subordinate to section 1002, which makes it clear that Presidential action granting foreign airlines operating rights in the U. S. through executive agreement is to take precedence over action at the plenary level.

Clark also argued a case against a requirement that all executive air agreements assume the form of a treaty.

PRIVATE FLYING

'Midnight Oiler' Radical Design Lightplane is Built by Rohr

Two-place, all-metal canard design features complete "air control" space and laminar flow wing.

Lightplane fliers, who have grown weary waiting for the long-promised "wings of light" lightplane, can find their patience rewarded upon completion by the Rohr Aircraft Corp. of the N-64-1, the most unconventional lightplane designed announced in a decade. It is a two-place, all-metal canard design featuring complete "air control" by which the surfaces are moved by pressurized or reduced through ducts in the wing panels and fuselage.

Outstanding feature:

A fuselage reminiscent of a bowing pan with an exaggerated nose section and a raised forward boom supporting the elevators.

Except for laminar flow wing with fixed gliders, the top is to provide maximum stability only.

Rotated power plant which drives a propeller for propulsion of the plane and a centrifugal air blower to provide pressurized air for the control system.

Full retractable tricycle landing gear folding forward into the fuselage and nose boom with roll-down covers over the gear in the retracted position.

A system of fuselage boundary layer control in which engine cooling air is taken in through a canard-mounted slot which is claimed to provide considerable drag reduction as well as improved airflow to the propeller.

A radical two-control system which utilizes a series of wing flaps to operate biplane-type flap functions.

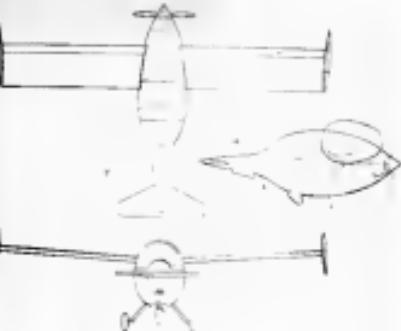
Drag reduction effected by location of the engine in the nose and elimination of the tail, thereby doing away with the "cleaning" effect of the propeller air currents.

Maximum visibility due to location of the wing at the rear of the nose section and at shoulder height.

Extremely high performance due to drag reduction and lightweight construction. Empty weight is only 400 lbs.

Small dimensions for ease of ground handling, including nose-to-end of the aircraft and storage in an ordinary 27½ ft auto garage. The wings fold for highway transport.

passed air into the boundary layer. Rotation of the wheel is to the left, for example, partially clears a flap, air valve in the air duct leading to the left wing. This shifts the flow of boundary layer air, thereby lowering the lift of the wing and moving the center-of-pressure forward. Simultaneously, the lift of the right wing is increased and the center-of-pressure moved aft, both compensated by a differential jet effect of the boundary layer slot which provides the yawing moment to turn the airplane. Longitudinal control is provided by a sweep-forward surface on the nose, the elevator portion of which is also provided



Rohr's New Design This wood two-place personal plane is now being constructed by Rohr Aircraft Corp., Chula Vista, Calif. As shown by the drawings, the fuselage projected ahead of the cabin with wings the stabilizer on rear-wing type plane. In memory of the early morning hours spent on design and initial shop work, Rohr employees have dubbed it the N-64-1, the name suggesting "Midnight Oiler."



with a full span pressure slot device. The new control system has been designed to overcome many of the disadvantages of the conventional control system. The use of boundary layer control permits maintenance of lateral control at the maximum lift coefficient, produces favorable yawing moments (other than the adverse ones produced by differential ailerons), permits development of the theoretical maximum lift coefficient of the aileron in flight, permits higher lift at lower angles of attack and sharply reduces the profile drag.

The M.O.-1 ("Mileau Oiler") has not yet been completed and future plans are awaiting the outcome of an extensive flight test program to test the various aerodynamic features of the design. The plane was designed by G. F. Haynes, Test Supervisor of the plant. Sokef Aircraft Corp. is located at Chats, Vtoria, Calif. (just west of San Diego) and pioneered the technique of "packaging" power plants.

New Airport Guide

An airport guide for private flyers is being published by Becker Air Services, Inc., Franklin, Conn. Printed in a pocket-size edition, the guide lists airports by name as they appear on sectional charts, and gives information regarding aeronautics, landing, type and location of runways, type and location of wind indicators and landing lights, landing and take-off regulations and service facilities. All data has been checked and verified since April 1.



CUBS SHIPPED BY AIR

These new Piper Cubs are being shipped at a time in Douglas DC-3 transports, from Spokane, Wash., to Anchorage, Alaska. The much delayed Sopris have been made and four more flights were scheduled in June. The planes are shipped by land car to Spokane, from Los Angeles, Pa., and then reloaded in planes of Western Air Service, Spokane, to Larson Alaska, Distributing Company. Piper distributor at Anchorage. The larger three-place Piper Super Cubans are being flown all the way from Lackawanna, Pa., Alaska for delivery to customers. Photo shows arrival of first aerial delivery at Anchorage.

Piper Plane Cavalcade Will Fly to Panama

For the third time since the war, Col. John C. L. (Jack) Adams will lead a flight of 11 Piper Cubs and Super Cubs and possibly some unusual personal flyers—from Lakewood, Pa., on the first leg of a delivery flight to Panama. Flight is scheduled to start today.

All the Pilots are assigned to Adams Enterprises in Spanish America (AEAS), Latin American agent for some 20 American firms, including the Piper distributorship for that area, headed by Col. Adams and his wife.

Next week's flight, sponsored by NASA and the Inter-American Aviation, will serve as a preliminary fact-finding trip on which Col. Adams will make plans for annual Inter-American Lightplane Cavalcades in which invited pilots from all over the United States and Central America would participate.

These trips would involve approximately a month, since social activities will be planned at many places enroute and to allow time for sightseeing in each of the Central American countries along the route, which Col. Adams has named the Central American Lightplane Low-Way Route and over which he has now an ASA—before going overseas for combat duty in Italy and France.

Itinerary of next week's flight is as follows:Leave Lakewood July 1, overnight in Lexington, Ky., overnight in Memphis July 2, overnight in Fort Worth July 3, a brief

stop west of Fort Worth and flight to Houston as July 4, fly on to Brownsville July 5 for the Inter-American Aviation Rally and spend the night at Tampico, Mexico, July 6 proceed to Veracruz and on to Toluca, depending on flight conditions, go through Mexican customs at Tepic July 10 and reach Guatemala City that night, fly to Salvador the morning of the 13th and on the 14th or 15th go on to Santa Ana to meet members of the Salvador Aviation Club, July 15, on to Nicaragua, July 16 to San José, Costa Rica, and July 22 to Panama City by way of David, Panama.

The Inter-Cavalcade will follow the same route as the same time as that selected for the coming delivery flight. Though the exact date remains to be set, it will be scheduled for sometime between November and February. Inquiries regarding the Piper Cavalcades should be addressed to Adams at Box 2070, Akron, Canal Zone.

Seattle Lightplane Dealers Plan Sub-Assembly Plants

With a backlog of several hundred orders for light planes by Seattle residents, dealers, real estate men and nearby farmers, several Seattle aircraft distributors are planning the establishment of sub-assembly plants.

The Washington Aircraft & Transport Corp., distributor for Stinson and Aerocar, already has received and assembled its seventh carload of planes and plans to establish a large production shop as soon as possible. The president of Washington is Arthur Johnson, and Charles H. Wilson, Director of Sales, is in charge of the assembly program.

Northern Aircraft Co., which distributes Commonwealth Aircraft through the Pacific Northwest, Canada and Alaska, has announced it will operate an assembly plant at Belling Field. Production in this plant eventually will reach 35 to 40 aircraft a week, it is estimated by Arthur Johnston, president.

Gulfstream Flying Service will assemble Piper Cubs for sale in the Seattle area, moving parts in a freight building and assembling them as orders are received.

2,263 Lightplanes Shipped

Lightplane manufacturers shipped 2,263 aircraft in April, or 20 percent more than in April of 1945, it was determined. The Department of Commerce has revealed. This total was exceeded from reports of 11 companies. This left a backlog as of the end of April of 28,321 aircraft.

Use Military Devices Is Loening Advice

Suggests enclosed winch, enclosed and home-made mounting gear to increase utility of lightplanes

Possibility of utilizing in personal plane operation the various landing and take-off aids developed for the Army and Navy has been suggested by Grover Loening, special consultant to the National Advisory Committee on Aeronautics.

Addressing the light aircraft meeting of the Institute of the Aeronautical Sciences, at Boston, Loening specified the need for improved take-off. "A small cabin operated by a compact take-off unit by a electric motor, and which could be set up at an angle of 45°, G," would get the auxiliary lightplane off on an unusually short distance—well under 300 feet and not be in the least uncomfortable to the passengers."

Par-Arcane Suggested—In addition, Loening declared, "it would not be difficult for this same device with the tiny field to hold his gardener or wife up on a couple of feet or five were cable-extending landing device that would switch in hook on his plane which would be similar to a deck landing device."

Loening put forth this suggestion in connection with statements on the problem of sufficient landing fields to achieve widespread use of personal planes. Probably the more important factor slowing down establishment of airports is the noise of planes. He pointed out that what is needed is a large number of airport facilities in the "neighborhood where we live." This cause, he said unless steps are taken to cut down on noise.

When being done in that direction, he was assured by Lt. Col. Theodore Thompson of NACA's Lightplane and Landing Devices Division that an arc motor of 1000 watts, and that 20 percent radio control could be increased in the future, and that 20 percent radio control was entirely in the realm of possibility by the use of a propeller with as many as eight blades free rotating at a low rotational speed. "This type of propeller is the only means of reducing the sound level of a plane," he stated.

Need More Speed—Increased speed of personal aircraft depends upon increasing the speed range—the ratio of high speed to level flight to minimum speed—on the opinion of Walter J. Johnson, chief engi-



AEROBICA CHUM

First view of the new Aerobica Chum, a low wing, span-proof two seater with simplified controls, as displayed at the Birmingham, Ala. Air Carnival. Charles Smith (in the cabin) and Robert Duncan (right foreground), both of Aeromax, demonstrated the new model.

ner for Piper Aircraft Corporation.

His reasoning is that "if we were to use such strong, restrictive features of the aircraft, we only pass over the most important who has the time and necessity for making frequent trips of even several hundred miles in length." That is, the importance of increasing speed.

Difficulty, he pointed out, is that greater speed creates greater wind resistance, higher landing speed, and this brings up again the lack of sufficient small airports. He then suggested more widespread use of ships or air boats.

Taylorcraft Seeks Planes

In a move to speed production and decrease the certification procedure, CAA has announced a plan to have 1000 aircraft and engine examiners for airplane and engine mechanics. Goal is to have 300 mechanics by Jan. 1, 1945.

Need for the new examiners is pointed up by CAA's statement that since the end of the war, applica-

tions for new facilities, the company says, could not be raised from 10 to 20 a day.

Taylorcraft will also shoot 100,000 sq. ft. of each new location. In Tulsa, efforts are being made to acquire part of the former Douglas plant. Each of the final assembly plants would employ from 130 to 150 persons.

Industry Examiners For CAA Mech Tests

In a move to speed up and decrease the certification procedure, CAA has announced a plan to have 1000 aircraft and engine examiners for airplane and engine mechanics. Goal is to have 300 mechanics by Jan. 1, 1945.

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USED PLANE LOT:

Max Turner, New York used car dealer who used to call himself the Flying Farnsworth, was out himself the Flying Farnsworth, and is selling war surplus aircrafts (like the BT-12A pictured here, certified for civil operation) on his car lot ready to fly away.

Plans for mechanized certificates have been coming in at the rate of about 500 a month, double previous rate.

The designated examiners will be selected and recommended by CAA inspectors in field offices. When designated, he will be authorized to charge a reasonable fee of \$15.00 for each examination. The written portion of the examination must be completed by the applicant under supervision of a CAA inspector, the designated examiners will examine the practical and oral tests. Work of the designated examiners will be spot-checked by CAA inspectors.

Requirements for designation are: At least 25 years old; holder of mechanics certificate for at least three years, with five years desirable, active in capacity in which he is to be designated continuously for three years, be an supervisory employee at a fixed base of operation and have necessary equipment to give examinations; good record with respect to ability and judgment as mechanics, and be highly respected in community.

The machine examiners system is the tool of CAA's means to delegate the responsibility for some of inspection and certification to industry. Pilot examinations and aircraft inspections are already performed under such an arrangement, and CAA announced last week that it has now appointed 386 aircraft inspectors, a rate of better than 100 a month since appointments began in March.



SWING LANDING STRUT

Miss Janice gear strut of the Globe Swift personnel plane is being manufactured by Adel Precision Products Corp. and is designed to take a burst load factor of 6.25 on a 1,750-lb. airplane. It is especially made for light planes.

Briefing *For Private Flyin*

TAKESOFF AT ALTITUDE—Some approximate calculations governing length of takeoff at various temperatures have been made by the Matthes Aircraft Conferene, Chicago, as a guide to provide flying. For example, a 60 degree increase in temperature, the pilot should allow 25 per cent more runway for takeoff. Example: A plane that takes off in 900 ft. at a 30 degree temperature, will need 1,108 ft. at 69 degrees or 1,984 ft. at 108 degrees. Likewise rate of climb should be estimated at least 25 per cent higher for each 10 degree increase in temperature. Increase in temperature also increases the plane's rolling speed, so that at 60 ft. to 100 ft. per sec. or 60 ft. per sec. increase in temperature, the plane will roll on with difficulty on a high-altitude landing strip in the mountains, in the summer, although he had taken off repeatedly without trouble from the strip during the previous winter. He finally got his plane out, by an early morning takeoff when temperatures were more likely low, by using every foot of the runway, with a lightened load, and with a change in wind direction which allowed him to takeoff away from the principal hazard, some 100 feet tree.

THE STEINSON LINE—For the first time in recent months, Charles E. Valente has reorganized the full personal plane Stinson line against William Ebel, vice-president in charge of sales, says the Stinson Co. It includes besides the "Voyager 150" four-place plane now in production, a low-cost two-place plane; a three-place plane, the five-passenger "Sky Coach"; and a twin-engine executive transport to carry five or six. First deliveries soft-pedaled because the planes were not ready for production. The B-100 announcement may mean that at least some others of the line are about ready for quantity production.

WEATHER MINIMUMS—A suggestion has been set out by Col. Ben S. Kelsey, director of the AAF All-Weather research panel, at Wright Field, Ohio, that different weather minimums could be applied to different types of planes, could wait four-hour nonstopover by CAA and CAA safety experts looking toward a modification of existing regulations. Col. Kelsey points out that current maximums for ceiling and visibility are the same for a Paper Clip Glider as for 37 mph, i.e., for a B-39 which lands about three times as fast. He suggests that planes with slower landing speeds might be classified under a regulation which would permit them to operate safely with lower ceiling and visibility. If they were flying at slower speeds and had low landing speeds, all that would be required is to segregate future helicopters as the ultimate private aircraft. This can proceed at very slow speeds or even back up or fly sideways. It is even possible, and one land at zero mph forward speed, making it unable in weather conditions which would be entirely unsafe for non-vestigial airplanes.

ROUNDTRIP TRANSCONTINENTAL—In the same category was the flight started by Pan American's First Officer James B. Strode, his wife and two small sons, flying a Piper "Super-Cub" from New York's Flushing airport to Seattle, and return. They expected to make eight stops at Detroit, Omaha, Rapid City, S. D., and Sioux City, Iowa, before arriving in Seattle. There Strode would, among other things, be given over the new 38-passenger Boeing "Stratosphere" which are due to go into service for Pan American sometime in 1947.

VACATION FLIGHT—Capt. Leopold Ackerlina II, former ATP pilot in Egypt, India and Africa, and his wife, Mrs. Jessie, recently on a two-week and one-half-month vacation flight, expected to conclude in a stopover at every state capital of the nation. Flying their own Avco, the Ackerlinas had endorsements of the Boston and National Automobile Associations and earned invitations from Governor Charles E. Haile of New Hampshire, in behalf of the New England governors, to other governors, inviting them to visit New England by air. They planned to return to Boston by Aug. 17. They made their trip themselves with the exception of the occupancy of least part of the southermost by showings of numerous

Alexander McPart

test pilots on the ground

Telemetering — the instantaneous transmission of flight information to instruments on the ground — has opened new fields for obtaining scientific data on objects in flight. Whether piloted or piloted, their exact behavior can be accurately determined during the entire flight, providing the engineer with information for further research and development. Combined with newly developed electronic control devices, this achievement of Curtiss-Wright represents another advance in the use of supersonic flight.



FOUNDED IN 1916
CURTISS-WRIGHT
Aerospace Division
COLONIAL, OHIO

Developing Right Skills Meet the Future.

PRODUCTION

Minneapolis-Honeywell Making Bid to Stay in Aviation Business

Control manufacturer expands as plane speeds war suspending capacity of human guidance; autopilot will be in with auto-ride landing system.

Discusses last week by Minneapolis-Honeywell Regulator Co. of its C-47 "Auto-Ride" autopilot, planned with the Army to introduce it to aircraft control systems, business industry attention to a relative newcomer which is making an earnest bid to stake out a large market in a field long dominated by old-line aviation firms.

The test plane—out a new idea to say nothing of merely a small part of a much larger project Honeywell was given to start in the large-scale production of servosystems by the war. It is one of the few great non-aviation industrial companies to continue in aviation after the war. To its experience as a 50-year-old manufacturing concern it has added a concept which while not revolutionary is distinctive enough to be noteworthy.

Pass Human Control.—In its essence, that concept is that both military and commercial planes are boasting speeds to a point where human abilities and reactions can no longer be called upon with certainty. Honeywell's wide-ranging industrial business is based on automatic controls for all vehicles which require a type of steady, constant regulation, such as human sensor control perform. To Honeywell, its technological devices are mere extensions of its industrial controls business.

Currently the company is engaged in research and development of all aircraft control systems. Its equipment already in use is DC-3s, DC-4s, Boeing's C-87 and Republic's Aerocar. The Honeywell autopilot will be in the B-52, Boeing's XB-45 and Consolidated Vultee's soon-to-be XA-36.

During the war, Honeywell's auto-ride pilot was standard equipment on AAF heavy bombers and on some Navy planes and aircraft

number of turbo-superchargers, and automatically maintains selected constant pressure regardless of altitude or temperature.

Electric cabin temperature control system which compensates for outside temperature changes even before they are felt within the airplane.

► EAGLE KNEEPIECE.—The company using these devices as a warplane rate a new field has for years been the country's leading manufacturer of heating and ventilating controls. With more than 10,000 employees, it has plants in Minneapolis, Chicago, Waukegan, Ill., Philadelphia, Toronto, London and Stockholt. Even as such a giant company, the wartime aircraft control production, hitting \$180,000,000, was not small.

How far down that figure will drop in a commercial peace-time period, company officials have not yet estimated. But they are vigorously engaged in trying to keep it as high as possible. A separate division has been established for the aeronautical products. It is housed as part of a large new wing being added to the Minneapolis plant.

A separate sales staff has also been set up for the Aero Division. At its head, with the rank of vice president, is Minneapolis-Honeywell's Alfred M. Wilson, an M. I. T. graduate engineer, who set up and directed the Army Division during the war.

An example of what Wilson and his division are up against was the announcement by Boeing Aviation

of Canada, Britain and Australia since 25,000 autopilots and furnace controls systems were produced during the war. Work for the service is continuing.

► KEY PERIPHERAL.—Keeping the perimeter command-and-control, Honeywell's main item is its electronic autopilot. It weighs 60 lbs., but is designed to control all existing planes, as well as those on drawing boards. It can be put into operation by pushing a button on the control wheel. It can be coupled to another device, which, utilizing CAA's instrument landing systems, can land planes with the pilot hands off the controls.

Other strings to Honeywell's bow:

Electric fuel gauge system, accurate within two percent over all conditions of altitude and temperature; tire inflation system; moving parts.

Electromagnetic tach-o-regulator which permits single-shaft control of any



EDO PRODUCTION:

Advancing an output rate of 40 Model 1326 biplane seats a week, Edo Aircraft Corp., College Point, L. I., is experiencing an unusual output seven times that of any previous year. Up to the middle of June, company had turned out more all-metal lightplane seats than in any previous one-year period.

the
four-most
side-by-side
personal
plane

FEATURE—130 miles to
1000' altitude.
Right seats in the Taylorcraft
are built in the U. S. C. to
make them more comfortable
and durable.

Taylorcraft

WORLD'S LARGEST MANUFACTURER
OF SIDE-BY-SIDE AIRPLANES

best buy
in the sky

**WORLD'S LARGEST MANUFACTURER
OF SIDE-BY-SIDE AIRPLANES**

LOADER—1st Army
Air Forces
House and building made
out of old plane
parts.

FIELD—Aerocar
Light Plane
Wings of the Chinese Treaty
of the new field of China in
July 1946.

Building the sensible or giving the impossible
Taylorcraft turns in a flying performance.

The four-most important words, it is the plane
that goes further, faster, higher and longer.

It's the plane that is as comfortable as a sofa. It is the
plane that nearly looks in any field as personal
as winter the sofa. It's the plane that is called the
"Best Buy in the Sky." Up men who've

found that place in the sky

Profit of \$4,809,738 Reported by Lockheed

Last year company earned and booked of \$119,000,000 study as already been off.

With settlement of terminated war contracts slated to have been completed in fall last week, and other wartime requirements already made, Lockheed Aircraft Corp. can concentrate on a backlog which Robert E. Gross, president, has reported to be nearly \$119,000,000.

In his statement to shareholders on the company's operations for the year ending Dec. 31, 1945, Gross revealed that Lockheed had earned \$4,809,738, after taxes of \$2,322,975, on sales totaling \$817,611,350. With sufficient working reserves, Lockheed was able to transfer to current surplus \$10,469,738.

1946 Sales Slump.—While the 1945 sales were considerably below the 1944 total of \$811,837,771, the amount transferred to surplus was \$947,646 above the 1944 item.

During 1945, Lockheed received payment of \$66,309,560 on long-term contracts of \$138,999,848. An additional \$66,561,452 has been recovered during the current year. Strengthening the company's financial position is the fact that it has exhausted all of its excess profit tax refund funds, amounting to \$4,857,337.

Taking advantage of another wartime tax regulation, the company has fully depreciated its massive plant facilities. The company's total facilities—built at a



BRAZON 1 TRANSPORT:

Model of the eight-passenger Bressingham 1, giant British transport—prototype of which is under construction by the Bristol Aeroplane Co. Passenger capacity will be 224 on short trips, 180 on daytime trans-Atlantic flights. Although the prototype will be powered by eight 2,300 hp engines arranged in pairs, later versions will be jet propelled or utilize turbopropeller units. (British Information Service photo.)

cost of more than \$86,886,000—are now carried on the books at less than \$4,000,000.

Fairchild Orders High.—In common with that of other manufacturers, Lockheed's backlog is up sharply in orders for the Army and Navy. It has orders amounting to \$144,200,000 for the P-80, the PBW patrol bomber, and the Navy transport plane Constitution. In commercial backlog, for Constellation, totals \$453,436,000.

While Lockheed declared a 16-cent dividend payable June 30, Gross stated the company would not consider the matter of dividends in the third quarter, but reserve judgment until the end of the year.

Payroll, for purposes of computing the one percent, will include all earnings such as overtime, vacation and shift differential pay.

Short Seaplane Amphibian In Five-Place Field

A five-passenger, twin-engined seaplane is being planned by British Short Brothers, manufacturers of the Bader Biplane flying boats. The new plane, designated Seaford, will be powered by two 220 hp de Havilland Gipsy Queen engines. Weight of the proposed craft is calculated at approximately 8,000 lb.

With a pilot and five passengers, the Seaford is designed to cruise 540 sea miles at about 150 mph with 185-mpg top speed.



TUDOR PRODUCTION LINE:

If Britain is far behind in transport production, as it is in aircraft construction, the situation is being corrected as is shown by the new model of the Tudor 1 production line at the A V Roe & Co plant. The new shows, in this photo, and 12 more are due to be completed for British Overseas Airways Corp. (British Information Service photo).

FINANCIAL

Airlines Raise Sights on Capital Requirements for Next Five Years

Billion dollars may be needed due to increased operating costs and disappointments in net earnings; shift in balance of business volume causes big need for small company financing.

The airlines have raised their sights on new capital requirements. As much as one billion dollars may be required in the five-year period through 1949. This compares with the estimate of \$850 million for the domestic item and \$550 million for the international services developed in a financing study released by a group of banks and insurance companies in 1945.

The increase of about 35 percent in this estimate is due to the unexpected rise in working capital requirements plus the disappointment in the current growth of net earnings.

The acceleration of additional capital developed through a combination of causes. The conversion of Army planes, their maintenance and amortization has been much heavier than first anticipated. Operating costs on all airlines have been sharply higher than existing data on working capital. Lower passenger and mail rates have satisfied much of the earning power which was originally expected from increased traffic.

Shift in Balance.—A shift in the total volume of business handled has necessitated larger financing programs by way of the smaller carriers. About three years ago, more than 15 percent of the total domestic business was handled by four major lines. With the expansion of many route developments of the regional carriers, increased fleet acquisitions of the latter naturally require greater financial outlays.

All of the air carriers are engaged in extensive promotional programs to develop their services as an intense competitive struggle formerly kept within restrictive confines by war restrictions. Such programs necessitate heavy expenditures.

Financing Plan Established.—Airlines' current debt/equity ratios, ranging in the extent of \$48 million, is non-convertible. A financing plan

is provided, but does not begin to operate until 1946.

It is an interesting contrast in that the American debt/equity carry a 3 percent coupon. In December, 1945, when TWA sold \$10 million in debentures privately to the Equitable Life Assurance Society, the interest rate was also at 3 percent.

Later in May of this year, however, when TWA obtained an additional \$15 million credit from the same source, the interest rate was reduced to 2½ percent. As both the American and TWA debentures are apparently the same as all major airports, i.e., unsecured and non-convertible, it is self-evident that the TWA credit was obtained on far better terms.

TCA's \$18 million 2½ percent debenture, issued in September, 1945, not only carry a higher interest rate, but also had to be amortized considerably by a conversion feature. Should there be any natural appreciation in the price of TCA's common stock, the company might then have to face retirement of the issue through the conversion route.

•

Other Finance Plan.—There are other major financing plans by air carriers in the immediate offing. United Air Lines recently advised its stockholders that the management expected to rely on bank loans to meet the \$18 million commitments for new equipment and expansion planned during the next 10 to 12 months.

Chicago & Southern Air Lines has filed a registration statement with the Securities and Exchange Commission covering voting trust certificates for 170,000 additional non-par common shares. About \$10,000,000 may be raised in this manner and will clearly be required to finance expansion, due to its new routes and the construction of new stations, as well as the acquisition of new aircraft. In Chinese, Chicago & Southern, at the only air carrier resorting to the use of voting trust certificates, this is a device to assure control for the management interest.

Northwest Airlines may be expected to announce its financing plans very shortly. It is anticipated that equity financing will be used by the company in preference to bank loans.

As the CAL makes known its new route awards, additional financing plans for many of the air carriers will crystallize to activate the new operations.

PIPER CUB OR DC 3

...SPARTAN has the modern facilities and skill for repair and overhaul...



(Above) Revision of the
Spartan Aeroplane Division
Department.



Spartan Aero Repair is America's oldest, and one of the most honored aircraft repair facilities in the heart of the nation and the nation's finest flying country.

Interiors Custom Built to Your Own Specifications

Complete conversion of military aircraft purchased from surplus. Interiors re-designed and rebuilt for comfort and practical efficiency... or custom built according to your most delicate plans. Repair and overhaul of everything on a private airplane whether it be of wood, fabric or metal construction... also expert service for all component parts—engines, propellers, radio, instruments, etc. WHITE for complete information.

SPARTAN
AERO REPAIR
Division of Spartan Aircraft Company
TULSA, OKLAHOMA

• SPARTAN AERO REPAIR... 100% C.A.A. Approved Station No. 50... has the modern facilities and skilled workmen for repair, overhaul or complete conversion of all types and sizes of aircraft. No job is too large—no job is too small. Spartan service is today being utilized by private owners of aircraft ranging from Piper Cubs to DC 3's.

SPECIAL AIR SERVICES

CHARTER

NON-SCHEDULED

INTRASTATE

Unscheduled Operators Charge Airline 'Monopoly' Freight War

INSTITUTE OF AIR TRANSPORTATION asks Congress to cancel air mail contracts; wants permission to compete with rail, seaship companies to haul cargo and passengers by air.

More than 70 "fixed base air carrier" members of the Institute of Air Transportation, declared war on the scheduled airlines and asked Congress last week to look at their "unjust air carriers." Certification of convenience and necessity originally issued to the scheduled airlines, IAT says, did not encompass transportation of air freight as such.

Pursuing the lawsuit, the Institute feels that fixed-base air carriers—a designation it prefers to "non-scheduled"—should be permitted to compete with railroads and seaship companies for transportation of mail, passengers and/or cargo within their respective areas.

Speaking in behalf of fixed base air carriers "from all parts of the country," the Institute organized immediate hearings on need for legislation allowing this type of service. Pending the outcome of these hearings, at which it wishes permission to testify, the Institute suggests adoption, with some exception, of the recommendations by CAB in comment on the Institute's non-scheduled petition.

Mailbox Cleared—ATC's proposal, recommended by the Institute's own review of an amendment to the order exempting non-scheduled carriers from economic regulation, were submitted to CAB, Chairman, the President, and other government agencies.

Lawrence J. Cost, president of the Institute, and its members also are convinced that "air parcel post can be flown now, and not years

hence as recently suggested, at considerably lower rates and also makes a profit for our carriers." In the absence of an air parcel post, the rate on airmail packages is 10¢ per ounce, same as regular airmail.

Both the chairman and Cost's statement showed heavy stress on the fact that most of the personnel and management of the fixed base carriers are veterans.

ICAO Attached—CAB's proposed amendment of the non-scheduled exemption order, IAT contended, would make it impossible for most fixed base air carriers to operate profitably, and would prevent carriers of general business, prohibited advertising of flight information, or informing the public about services offered, since flights to 300 miles north between any two points, restricted operations to North America, and prohibit all over-water inter-island flights.

The Institute's suggested classification and exemption of fixed-base air carriers, offered as a substitute for CAB's proposed amendment to the exemption order (See, page 281 of the Economic Regulation), would allow a maximum of 100 round trips a month on 500 best flying time, whatever is greater, or passenger flights between points previously served by scheduled carriers, with no economic restrictions on all-cargo flights except those relating to fuel economy.

The carriers also asked to be allowed to operate their services, subject to general business, and operate without restrictions on international flights. Other developments:

Carriers Disagreed—Leading air carriers, including Pan American, American, United, and TWA, have adopted a resolution to oppose the Institute's proposal.

Why Throttle US?

Why Throttle US? 

By JAMES M. COOPER
Editor, AVIATION NEWS

It's time to take a stand. The Institute of Air Transportation, New York, has a full page ad (right) in N.Y. Times to solicit public support for its campaign to keep the fixed base air carriers in business. The reader is invited to fill out and mail to the chairman of CAB the coupon in the lower right hand corner agreeing that "I agree with the FIXED BASE AIR CARRIERS proposed action on AIR MAIL and AIR PARCEL POST recommendations. I also agree with the regulation they suggest which will end those in 'KEEP 'EM PLAYING'." The ad appeared as behalf of 18 fixed base air carriers, mostly small operators of California, New England air services. Contract Carriers Association of Florida, Massachusetts air carriers and the East Coast fixed base air carriers.

New England Decision of CAB Authorizes Seventh New Feeder

Wiggins Airways, Inc., gets certificate for routes radiating from Boston and Albany to six states; Colonial, Eastern and Northeast get new strip extensions.

The nation's fast-growing feeder network added a seventh carrier last week when E. W. Wiggin Airways, Inc., Newwood, Mass., was certified for routes radiating from Boston and Albany into six states.

CAB's opinion in the New England case—fourth of 14 regional proceedings—the authorized new intermediate points and extensions for the routes of Colonial Airlines, Eastern Air Lines and Northeast Airlines.

Significantly, the Board discounted the last application proposing half a dozen cities of possible, property and said as "premises" that declare that the two bidders previously type-certified can carry only

small useful loads. CAB said the capacity of these craft does not approach that which would be necessary to carry out the plans of the applicants. In the current stage of development, the Board asserted, the applicant's principal utility would appear to be in carrying mail between a city center and points in the metropolitan area of that community.

Wiggins Service Listed—The Wiggin system will serve parts of New York, Connecticut, Rhode Island, Massachusetts, Vermont and New Hampshire, but will not service New York City as recommended by the examiner in the case. From the standpoint of mileage, Wiggin probably will be one of the smallest

Canadian Airports

More than \$1,000,000 is being spent this summer in improving airports and airport services along the St. Louis River section in northwestern Canada. A new airport is being installed at Fort Liard, Alberta, to eliminate the long gap between Fort McMurray and Fort McPherson. At the same time, an air strip is being graded, below water, at the booming gold mine camp of Yellowknife, on Great Slave Lake in the Northwest Territories; a second strip is being built and a standard radio tower is being installed. Another 100-mile-long air service on the route northwest from Yellowknife to Norman Wells (site of the Canso project during the war), where an RCAF photographic detachment is working,

local carriers certified. However, the 22 cities on its routes include seven with populations over 100,000 and several others clearly approaching that figure.

Wiggin is the first of the new area feeders which can prove to CAB the feasibility of exclusively local services in an unsaturated urban area. Organized in 1939, Wiggin since 1945 has conducted charter services, pilot training and other hand-hewn activities in New England. During the war, the company expanded its pilot training program and converted some of its facilities to building aircraft parts in a sub-contractor. Wiggin owns hangars and maintenance facilities at Newwood and East Boston airports.

Miss Beach 14—Based on their estimates on the use of transoceanic Beechcraft Model 18 equipment, Wiggin officials estimate need of 30 routes to a remote place such as will be necessary to build even. Company officials include Joseph Gendron, president; Donald E. Stone, executive vice president; and Charles R. Cowan and Charles H. Scott, vice presidents.

Detailed authorizations in the New England area decisions are as follows:

• Wiggin—Carries passengers to 14 remote points: property and mail between Albany and Boston via Binghamton, N.Y.; between Albany and Lancaster, Mass.; between Albany and Ticonderoga via Adirondack Mts.; between Albany and Utica; between Albany and Lowell, Mass.; between Albany and Boston via Springfield; between Albany and Worcester, Mass.; between Springfield and Boston via Worcester and Wrentham, Mass.; between Boston and Tewksbury, Mass.



New England Decision: Feeder routes authorized to E. W. Wiggin Airways, Inc., Newwood, Mass., and additional services granted Colonial Airlines, Eastern Air Lines and Northeast Airlines are shown in this map of CAB's New England area authorizations.



The aircraft of Trans World Airlines in present day of "modern" aircraft. Approximately 1,000 more Douglas transports are on order for 1946.

THE WORLD'S BIGGEST 4-ENGINE FLEET brings the world closer home!

Packed by the new, sensational Constellation, TWA's record fleet of 6-engine transports offers faster, more dependable schedules cross country or overseas.

TWA now operates more 4-engine planes than any other airline in the world. This is good news—significant news to everyone who has a trip to make either at home or abroad.

For with that record fleet at its command, TWA can fly nonstop, faster, and more frequent flights over earth and sea to less price.

With more planes of greater horsepower, a 4-engine can fly longer high-speed schedules along its route world-wide, in this country and overseas.

With increased numbers of the more modern types of aircraft, it can make wider use of "nonstop" flying to maintain schedules more dependably. In all these ways, the world's largest 6-

engines fleet helps TWA bring the places Americans want to go in this world closer than ever to home.

Take, for instance, a new only three-quarters of a day from the United States via TWA—and Ireland, like more

than half a day. While Geneva, Rome, Athens and Cairo can all be reached in proportionately fewer times, TWA passengers can spend a leisurely morning in Chicago and arrive in New York in time for dinner, or leave New York after breakfast, spend a full afternoon in Chicago and be back in New York that evening.

Nor are these new planes for the独裁者. They are examples of the service TWA already offers, within this continent and off the way to Asia. Soon, this same craft TWA's planes will reach even to India and beyond.

TWA
TRANS WORLD AIRLINES

P Colossal — Certificate for AM 3 submitted to include Pan American Airways, Lockheed, Pratt & Whitney and others, was denied. The Board of Governors ruled that in certain circumstances no service to China could be denied.

P Standard — Certificate for AM 3 and a certificate to Pan American Airways, AM 3, to operate paid passenger flights starting or terminating at any of 10 cities in AM 3, or via the Caribbean, AM 3, was denied.

P Northwest — Certificate for AM 3 submitted to Pan American Airways, AM 3, to operate paid passenger flights starting or terminating at any of 10 cities in AM 3, or via the Caribbean, AM 3, was denied. Pan American has submitted a certificate for 20 Pan American 240s.

Possibly the best United might negotiate for Boeing's long-range Stratocruiser and 400 for shorter flights was seen in a visit by company officials to the manufacturer's plant in Seattle.

The Pan American disclosed plans of 200 30-passenger 380's.

Braeutigam \$16,000,000 purchase. Braeutigam's \$16,000,000 purchase, largest in the history of the airline, represents a long-since proposed providing for all types of operation on the carrier's domestic and international routes which were recently extended to the Rio de Janeiro, Buenos Aires and Mexico City. The company's 380's, selected for high-turbulence flights in Latin America as well as service on the domestic system, will carry 40 passengers.

The twin-engine craft is indistinguishable for passengers purposes with the Martin 202, 18 of which have been ordered by Braeutigam.

Other major element of CAB's past interpretation of Sections 406 (b) of the Civil Aeronautics Act, Braeutigam said Congress has provided an effective safeguard against non-enforcement of the Act. Any shipping company or other aggrieved party has a clear opportunity to have the court set aside the Board's error in interpreting the intent of Congress, Ryan declared.

"But," he concluded, "no surface carrier agreed by panel decisions of CAB that the Board has ever asked a U. S. court to review the Board to correct its alleged misinterpretation. A court review of that question would force lay it out that charge that the Board has erred."

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The Waterman statement inferred that CAB denied surface applications in the Latin American case in the basis of comparative public in-

terest instead of German 408 to get an safer ground and to "prevent just what Mr. Ryan now suggests."

PAA, Braniff Purchase 43 New Transports

Purchase of 43 planes by two companies featured yesterday news among the airlines last week. Braniff announced orders for 12 Boeing 380s, six Douglas DC-4 sleeper planes and five additional Douglas DC-4s. Pan American has negotiated for 20 Pan American 240s.

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MONTREAL (Special) — Arrangements for further regional conferences on air navigation facilities throughout the world are being made by the Interim Council of the Provisional International Civil Aviation Organization.

The Council has Aug. 28 for the Caribbean, meeting and called on the U. S. to act as convening state and designate the place. Australia will be asked to call a conference for the South Pacific region in February, 1947, and the Council has decided to hold the South American meeting the following May, although inviting state for the latter has not been chosen. A South Atlantic meeting will be held immediately thereafter. The Southeast Asia and North Pacific meetings are scheduled for the fall of 1947, whereas the Africa-India Ocean conference is still indefinite.

Similar conferences already have been held in the North Atlantic and European-Mediterranean areas, and by the end of next year PICAOD will have organized air navigation facilities over most of the world. Physical completion of the required establishments will take more time.

In PICAOD maps of its world region, Russia remains a great black area, but observers feel that Soviet territory blocks interpretation routes say that for the present and some time to come the Soviet air transport system is unlikely to become internationalized.

The Council has entered its consideration of the Greek request for international air transportation, and AM 3, Pan American, particularly the important Athens airport through which funds traffic from Europe to the Orient.

The two DC-4s schedules will increase TWA's Coast service to four trips weekly. Flights serve Washington, Philadelphia, New York and Boston. Extension of TWA's route to Boston terminal is expected shortly.

PAA today (July 1) plans to inaugurate daily service (except Monday) between New York and San Juan with DC-4s. Route was granted in the Latin American negotiations.

PICAO Navigation Conferences Are Set

Concord cell Caribbean meeting Aug. 26, South Pacific region scheduled for February, 1947.

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The Council decided to wait until July 31 for negotiations on the case in the case and willingness to be assessed for contributions to the cost. A meeting of states concerned will be held at a later date to be decided by Council President Edward W. Stettinius, after consultation with the relevant governments. Interim station will be designated only at Athens airport and possibly on other Greek islands as well.

Also removed and deferred for later consideration by the Council was a report on the prospective 13 weather maps in the North Atlantic. The report gave top priority to two maps, both mid-ocean, one the east of Cape Farewell, Greenland, on the mid-Atlantic, the other east of the Straits of Belle Isle at 51.45 N., 53.30 W. Of the other 11, two are recommended for the Western Atlantic, six for the eastern.

The association said the split was proposed to broaden the market for the corporation's stock and an expectation that an increased number of shares of lower and value would facilitate issue and sale of additional shares to provide funds for enlarged capital requirements.

A special meeting of AM 3 stockholders will consider the proposal in New York City July 11.

Southern anticipate the same result. Northwest was in the black in May.

P More Financing — Meanwhile, there are indications that the present stage of offering is not over. In fact, says James A. Gandy, attorney for AM 3, the Board of Governors has proposed a 100-to-1 split of the market share of AM 3's financial stock interpreted as a portend to issuance of new securities or stock.

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law firm for a DC-4 lease, has rented space to its former vice-president. He will handle the space problem for the Board of Governors, will well deal in receivers, looks and management and hopes eventually to agent for private planes. Plans include ultimate extension to other airports.

Harris, who has started his 30th year in aviation, has been with scheduled operations 28 years; in one of the most widely known men in airline engineering and maintenance circles, he was chief of maintenance for Pan American Ocean area before his recent discharge as captain and return to PCA.



LANSIN SWORN:

James M. Lansin, who chairman of the CAB, is sworn in by Judge Harold M. Stepanek, associate judge of the U. S. Circuit Court of Appeals, District of Columbia, on recent ceremony. (Arikers Photo.)



NEW CHAIRMAN FOR CAB:

These other members of the Civil Aeronautics Board are grouped around James M. Lansin, new CAB chairman, shortly after his oath of office. Left to right standing are Col. Clarence M. Tamm, Josh Lee and Wallace Branch. Ground Ryan, vice-chairman and fifth member of the Board, was ill long to Mexico when the picture was taken. (Arikers Photo.)

Waterman May Carry Sea-Air Fight to Court

Another round in the long-standing battle by various carriers to engage an air transportation may be fought in the U. S. Court of Appeals if J. Waterman Steaming Corp carries out its present intention to appeal the Latin American decision. Such action by Waterman would constitute acceptance of a challenge contained in a recent speech by CAB Vice Chairman Oscar Ryan before the New York Association of Commerce.

Other major element of CAB's past interpretation of Sections 406 (b) of the Civil Aeronautics Act, Ryan said, has provided an effective safeguard against non-enforcement of the Act. Any shipping company or other aggrieved party has a clear opportunity to have the court set aside the Board's error in interpreting the intent of Congress, Ryan declared.

"But," he concluded, "no surface carrier agreed by panel decisions of CAB that the Board has ever asked a U. S. court to review the Board to correct its alleged misinterpretation. A court review of that question would force lay it out that charge that the Board has erred."

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PAA, Braniff Purchase 43 New Transports

Eastern-PCA Feud at Hearing On Boston-New Orleans Route

Rickenbacher charges of PCA pressure on key officials air committee-chasing \$100,000 annual fund to discourage competition on established routes.

Ill-conceived billing—evident in the first day of the Boston-New Orleans route before it broke out into an acrimonious series of charges and counter charges between Eastern Air Lines and PCA in later sessions of the proceedings.

Eastern's under-estimation of its service by several states in the Northeastern states, Rickenbacher asserted, was not entirely spontaneous. Capt. E. V. Rickenbacher, EAL president, and he could not recall any case in the history of the Civil Aviation Act when there had been so many pro-business epithets and vicious propaganda.

"Our governments, Chambers of Commerce and pressmen, local officials of almost all the cities have been subjected to repeated and continuous calls by packagers of epithets in this proceeding which are striking to destroy Eastern's service," Rickenbacher said.

PCA's study accused EAL of

making unsupported and unmerging charges and of certifying a jointman and unmerging airlink designed to poison the Board's mail routing in the shank. PCA said these were on the record positive evidence that EAL's openly avowed policy has been to spend not less than \$100,000 annually to prevent competitive routes being established by Board.

Rickenbacher Testifies—In other aspects of Eastern's case, Rickenbacher declared: (1) EAL is subject to more duplicating and paralleling competition than any other carrier. (2) All carrier attempts to improve service have been handicapped greatly by inadequate airports and the "no-show" problem. (3) The industry has over-ordered new equipment and to a degree that some of the manufacturers know is to be wary as to whether they will get their money. (4) EAL probably will not get its Martin 202's before April.

Rickenbacher and he would like to see a 2-year moratorium on new route applications until the airlines and the government settle new and level cost. To combat the no-show problem, he suggested that a percentage penalty be imposed when money is refunded if the ticket has not been cashed a certain number of hours before.

Delta Air Lines president, C. E. Woolman, following PCA and EAL officials in the stand, declared that two airlines, Eastern and American, are attempting to block off competitive service from the South to Washington and New York. Referring to the profits and route releases of the two larger carriers, Woolman said they could well stifle the slight diversion of traffic which might result from a Delta route into New York.

Air Freight Case

Parties in the Air Freight case (Decided 1948) have been compelled to observe Title II's Economic Regulation requiring all applicants to name every terminal and intermediate point on routes applied for. Examining in the case recognized that the Board may find need for less rigid route controls in establishing air freight shipping operations. The parties did, however, that in their opinion routes can be set up to serve any and all points (whether named or not) within a specified area or all points within a designated radius of a specific point, not to be certified under Section 603 (e) of the Act.



STONECRUSHER SHAFT GOES BY AIR:

This seven-and-a-half-ton shaft of a stone crusher machine, carried by American Airlines in a cargo DC-4 from Milwaukee to Newark, N. J., is believed by Americans to be the largest single piece of machinery ever carried by air on a commercial plane. The wooden platform distributed the weight at an even 250 lbs per sq ft. The trip took 3 hrs 45 min., against more than a week by rail.

Senate Committee Snubs Truman Policy

A majority report of the Senate Foreign Relations Committee, recommending ratification of the International Civil Aviation Convention, states that approval of the Convention does not signify its endorsement of the bilateral commercial air agreements the President has entered.

"One consideration has been given to the resolution of the Senate Committee on Commerce which questioned the authority of the executive branch to enter into such important agreements as international air transport agreements without submitting them to the Senate in the form of treaties," the report stated. "In the discussion before the Foreign Relations Committee, it was made clear that the committee's approval of the convention is not dependent upon its ratification or its approval, either directly or indirectly, of any of the other agreements."

Meanwhile, at a House-Senate Senate conference, minority party members agreed to support Sen. Owen BREWSTER (D., Me.), in opposing ratification of the Aviation Convention at this time.

Brewster, while endorsing the Convention, still maintains that Senate ratification would constitute approval of the domestic Anglo-American and other executive air transport agreements, since the President has no authority to ratify treaties of the Convention. He also notes that the executive branch of the government will continue to recognize air transport rights with other nations via executive agreements.

Minority leader Wallace White, ranking Republican member of Foreign Relations, announced he would file a minority report, protesting ratification of the Convention now.

Hawaiian Sugar Interests Alarmed by Airborne Pests

Alarmed by an influx of insect "birds-birds" on planes arriving in Hawaii from other Pacific ports, the Hawaiian Sugar Planters Association has sent a wire to Washington to talk with government officials about establishment of Federal quarantine stations on such outlying islands as Maui, Oahu and Kauai.

Chairman B. Wujchman, association secretary, and California's congressional leaders had expressed concern over the situation. In-



PCA ADJUSTABLE WORK STAND:

PCA is ready to send stands to its shops and hangars at National Airports with this Universal Work Stand. Designed by PCA and built by The Glenn L. Martin Co., the stand has seven levels and adjustable "crosses" which permit adjustment of platforms height from 8 to 20 ft. A portable hoist which can be carried by plane to any station and used to replace engines, also is being used.

crease in Pacific air traffic, he said, have made ineffective the present method of inspecting planes in transit and on arrival in Hawaii.

Eastern Asks CAB To Reconsider Case

Eastern Air Lines has petitioned CAB to reconsider the Latin American case, asserting that denial of PCA's request for a Florida-Cuba zone route tended to jeopardize the present monopoly of Pan American Airways and its subsidiary, Pan American-Cubana Airways.

The decision, Eastern said, sharply contradicts the agency's decision half of the U. S. and places PCA's system behind an international haulage via Miami. Eastern claimed that while it had developed much of the Latin American traffic it had been granted a mere portion of new route authorizations—1,093 miles. PCA, the petition continued, was given 4,000 additional route miles and carried which had only a minor part in development of Latin American traffic were given lengthy foreign extensions.

Southwest Airways, granted over 7,000 route miles, was described by PCA as "a minute western regional

carrier which can never provide more than short hauls for PCA's monopoly." EAL and Chicago and Southern Air Lines was awarded almost 4,000 additional miles although "it is a small and inferior system which has never had substantial participation in Latin American transportation."

Three other applicants in the Latin American case—Colombian Air Lines, PAA and Western Steamer Corp., also have asked for reconsideration.

Swedish Airlines Get C-47s Converted by Canadian

The first of seven C-47's converted by Canadian, Ltd., Montreal, for Swedish Airlines has been delivered. The other six are due soon and the remaining four during the summer.

Airway surplus, the planes were purchased by Canadian at \$12,500 each. Modification cost is running \$90,000 each, the total contract involving about \$750,000.

The ships will be fitted to B-17s and used on the carrier's continental service, competing with the trans-Atlantic Scandinavian service expected to start about the first of August.

VIP: Aviation's Public

So now think that only "very important people" are flying the daily trans-Atlantic Clipper? So did we until we caught a glimpse of a Pan American Airways list of New- and Mexico-bound passengers last week.

It was a surprise, even to an aviation writer who has been following the news, to learn so little. Who the passengers are, whether they are rich or poor, and Mrs. John Cipriani from the Bronx or Alabama, scarcely benefit the audience in the old theater, perhaps having the children sit in the dark all night without a word to anyone here are usually alert probably for these in the audience are narrate business.

For while the courage and gung-ho of the instant past are the propulsive industrialists and the warred statesmen who won the award in the New York news columns, the present and future of the industry is bound to be linked to the international airways as much as the most optimistic VJs exports and aviation writers would hardly have dared to prophesy as recently as VJ Day.

True, a couple of well known models and stage stars were chosen the day we drew the passenger list, along with a few other names, but the majority of the names on the list were chosen by us, as we desired, a couple of morphine and amphetamine, and a guaranteed emergency. This would have been done to us to prevent pragmatization of a typical American, who would have been unable to handle the passage. But, their 2000 and, except for a few never mentioned, they never did.

Seaplane Bases and Red Tape

To the long list of government regulations already passed down upon the weary and confused private pilot there would propose to be added still more by just another agency whose identity you would never divine without a crystal ball.

The time is the Officer of the Ohio River Division at the Corps of Engineers, War Department, seeking to draw up support for regulating采石场 bases by means of "special conditions" to be added to War Department

Most of the prohibitions and conditions which would be imposed in response to proposals should be an agreement of already adequate Civil Air Regulations and U. S. Coast Guard letter rules, and are entirely suitable the prohibitions of the Engineers. Several of them would put any existing seaplane base out of business in short order, and the number of new bases which could be started under such conditions would not exceed the number of existing bases.

1911 crop of grain.
There are some of the plots of the Ohio River Diversions
—No navigation or navigation shall take off when any river craft (including canoes and small pleasure craft) in the navigation stream or any river above, shall have obstructed the navigation stream for any river craft.
Diversions and amphibious vehicles shall not go on or under water in navigable waters during night lights required by the Coast Guard. Requirements and such additional lights as may be required by the U. S. Coast Guard. (Note that "additional lights" is omitted).

BENNETT H. WOOD



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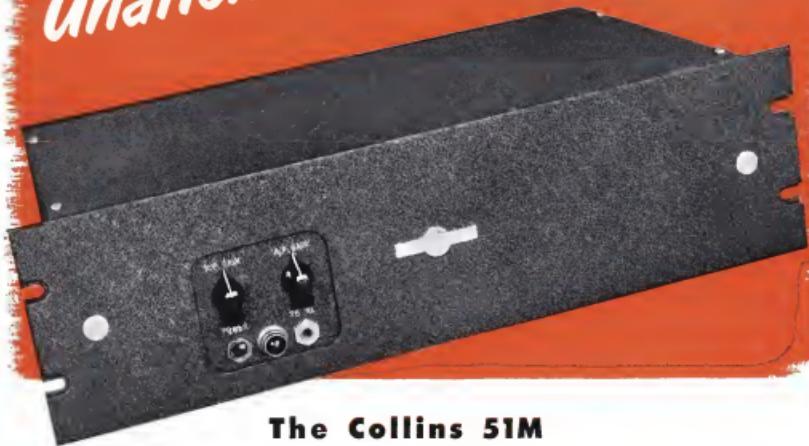
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